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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/904,306	07/12/2001	Peter R. Nuytkens	12569-107	2085
26486	7590	11/05/2003	EXAMINER	
PERKINS, SMITH & COHEN LLP ONE BEACON STREET 30TH FLOOR BOSTON, MA 02108			VU, QUANG D	
			ART UNIT	PAPER NUMBER
			2811	

DATE MAILED: 11/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/904,306

Applicant(s)

NUYTKENS ET AL.

Examiner

Quang D Vu

Art Unit

2811

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on amendment filed on 10/01/03.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-13, 17 and 45-54 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-13 and 17 is/are rejected.
- 7) ☒ Claim(s) 45-54 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

Claim 45 is objected to because of the following informalities: In line 4, the phrase “andone or more of the conductive layers” fails to clarify what is andone meant. The phrase should be changed to “and one or more of the conductive layers”. Appropriate correction is required.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 11-13 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 4,783,695 to Eichelberger et al. in view of US Patent Application Publication No. 2001/0002275 to Oldenburg et al.

Regarding claim 11, Eichelberger et al. (figures 2, 3A and 3B) teach an electrical circuit comprised of:

at least one dielectric layers (20, 30); and

at least a corresponding number of layers of electrically conductive material (25, 35)

patterned to form multiple electrical interconnects, at least one of the corresponding number of

Art Unit: 2811

electrically conductive material layers (25, 35) disposed above a corresponding one of the at least one dielectric layer (20, 30).

Eichelberger et al. teach polymer dielectric layer (column 2, lines 3-7; column 9, lines 16-20). Eichelberger et al. differ from the claimed invention by not showing dielectric layer comprised of latex. The latex is a known material for the polymer dielectric layer as shown for example by Oldenburg et al. (paragraph [0019]). It would have been obvious to one having ordinary skill in the art at the time the invention was made to select a latex polymer dielectric layer, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use. In re Leshin, 125 USPQ 416.

Regarding claim 12, Eichelberger et al. teach the electrically conductive material is copper (see figures 2, 3A and 3B; column 9, lines 8-9; column 10, lines 9-10).

Regarding claim 13, Eichelberger et al. teach the dielectric and conductive layers are used to connect individual bonding pads of different integrated circuits which are part of a multichip module (see figures 2, 3A and 3B).

Regarding claim 17, Eichelberger et al. (figures 2, 3A and 3B) teach a multichip module comprising:

- a plurality of integrated circuits (15a, 15b) mounted on a substrate (10);

- at least one flexible dielectric layers (20, 30); and

- at least a corresponding number of layers of electrically conductive material (25, 35) patterned to form multiple electrical interconnects between bonding pads (16) on different ones of the integrated circuits (15a, 15b), at least one of the corresponding number of electrically

Art Unit: 2811

conductive material layers (25, 35) disposed above a corresponding one of the at least one flexible dielectric layer (20, 30).

Eichelberger et al. teach polymer dielectric layer (column 2, lines 3-7; column 9, lines 16-20). Eichelberger et al. differ from the claimed invention by not showing dielectric layer comprised of latex. The latex is a known material for the polymer dielectric layer as shown for example by Oldenburg et al. (paragraph [0019]). It would have been obvious to one having ordinary skill in the art at the time the invention was made to select a latex polymer dielectric layer, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use. In re Leshin, 125 USPQ 416.

Allowable Subject Matter

Claims 45-54 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quang D Vu whose telephone number is 703-305-3826. The examiner can normally be reached on Monday-Friday.

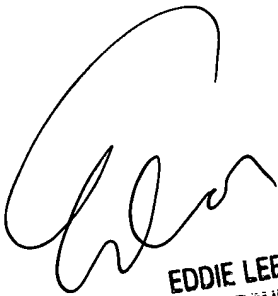
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie Lee can be reached on 703-308-1690. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Art Unit: 2811

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

qv

October 28, 2003



EDDIE LEE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800